

Title (en)  
INJECTION UNIT

Title (de)  
INJEKTIONSEINHEIT

Title (fr)  
UNITÉ D'INJECTION

Publication  
**EP 3222403 A1 20170927 (EN)**

Application  
**EP 17160991 A 20170315**

Priority  
JP 2016060668 A 20160324

Abstract (en)  
The present invention provides an injection unit in which a longitudinal dimension can be shortened. An injection molding machine includes a cylinder (41) in which a molding material is supplied to the inside, a front support (51) to which a rear end portion of the cylinder (41) is attached, an injection member (43) which is rotatable and movable forward and backward inside the cylinder (41), a rotation drive portion (45) which rotates the injection member (43), a rear support (53) which supports the rotation drive portion (45) and the injection member (43) and moves forward and backward with respect to the front support (51) behind the front support, and a load detector (47) which is attached to the rear support (53) before the rotation drive portion (45) and detects a load which is applied to the injection member (43).

IPC 8 full level  
**B29C 45/77** (2006.01)

CPC (source: CN EP)  
**B29C 45/5008** (2013.01 - CN); **B29C 45/58** (2013.01 - CN); **B29C 45/76** (2013.01 - CN); **B29C 45/77** (2013.01 - EP);  
**B29C 45/5008** (2013.01 - EP); **B29C 2045/5032** (2013.01 - EP); **B29C 2045/504** (2013.01 - CN); **B29C 2045/5052** (2013.01 - CN);  
**B29C 2945/76006** (2013.01 - EP); **B29C 2945/76214** (2013.01 - EP); **B29C 2945/76658** (2013.01 - CN); **B29C 2945/76859** (2013.01 - CN)

Citation (applicant)  
JP 2014100864 A 20140605 - MITSUBISHI HEAVY IND LTD

Citation (search report)  
• [X] EP 1741538 A1 20070110 - FANUC LTD [JP]  
• [X] US 2010062095 A1 20100311 - CADONAU THOMAS [CH], et al  
• [X] US 5129808 A 19920714 - WATANABE KIKUO [JP], et al  
• [X] EP 0752303 A1 19970108 - FANUC LTD [JP]  
• [X] WO 2014021051 A1 20140206 - TOYO MACHINERY & METAL [JP]  
• [X] JP H01238917 A 19890925 - NISSEI PLASTICS IND CO  
• [X] JP 2000117789 A 20000425 - SUMITOMO HEAVY INDUSTRIES

Cited by  
DE102019135281A1; DE102019135281B4

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3222403 A1 20170927**; **EP 3222403 B1 20180905**; CN 107225741 A 20171003; CN 112659492 A 20210416; JP 2017170800 A 20170928;  
JP 6629112 B2 20200115

DOCDB simple family (application)  
**EP 17160991 A 20170315**; CN 201710164768 A 20170320; CN 202011354375 A 20170320; JP 2016060668 A 20160324